

Documenting, analyzing, and teaching the grammar of direction in Karuk

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Acknowledgements

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- ▶ These slides: linguistics.berkeley.edu/~karuk/resources/icldc-2015.pdf

Outline

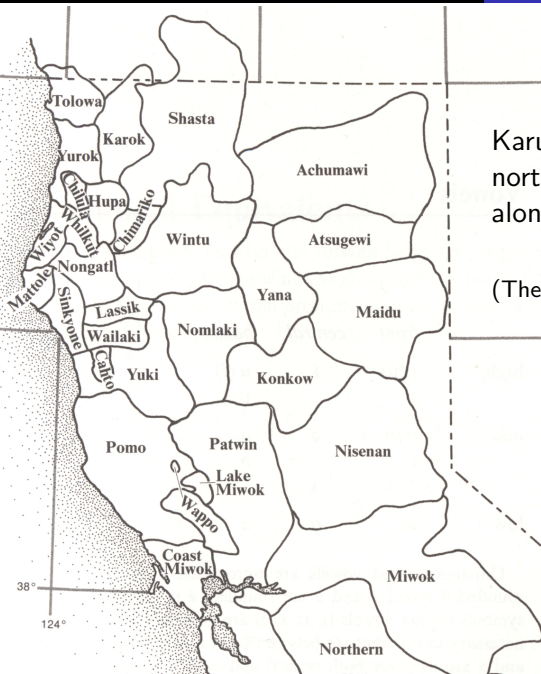
Background

- The Karuk language
- Database and web interface

Directionals

- Grammatical overview
- Pedagogical challenges
- Pedagogical approaches: A smuggler's guide

Conclusion



Karuk (aka “Karok”):
northwestern California,
along the Klamath River

(The word **karuk** means “upriver”.)

The Karuk language

► Contexts

- Geography: spoken along the middle Klamath River
- Classification: isolate within alleged Hokan group

The Karuk language

- ▶ Contexts

- ▶ Geography: spoken along the middle Klamath River
- ▶ Classification: isolate within alleged Hokan group

- ▶ Vitality

- ▶ 1850: estimated 1800-2700 speakers
- ▶ 1950: estimated 100 speakers (Bright 1957)
- ▶ 2015: <10 first-language speakers, 20-50 learners and L2 users

The Karuk language

- ▶ Contexts
 - ▶ Geography: spoken along the middle Klamath River
 - ▶ Classification: isolate within alleged Hoka group
- ▶ Vitality
 - ▶ 1850: estimated 1800-2700 speakers
 - ▶ 1950: estimated 100 speakers (Bright 1957)
 - ▶ 2015: <10 first-language speakers, 20-50 learners and L2 users
- ▶ Teaching
 - ▶ 2-3 fluent L2 users
 - ▶ Teachers: most are learners
 - ▶ Where: 2-3 elementary and high schools; community classes

Karuk text corpus

- ▶ Database as of January 2015
 - ▶ 150 texts containing 23,511 words in 6,167 clauses
 - ▶ texts recorded in work with numerous elders by A. L. Kroeber, J. P. Harrington, Jaime de Angulo & Lucy Freeland, William Bright, Monica Macaulay, and the present authors

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- ▶ Genres
 - ▶ traditional narratives, medicine texts
 - ▶ anecdotes, personal history
 - ▶ procedural texts, descriptions
 - ▶ conversation
 - ▶ documentation sessions: responses to visual prompts (avoiding English), responses to translation tasks (elicitation)

Vina Smith in 2013



Photo: Florraine Super

Karuk lexicon database

► History

- 138-page lexicon in Bright's *The Karok language* (1957)
- converted to Shoebox by Susan Gehr & William Bright
- William Bright & Susan Gehr, *Karuk dictionary* (2005)
- converted to XML format in 2000s; now a MySQL database

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► Scope

- >7,300 entries
- every entry has a unique ID

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- words in texts are parsed morphologically
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► Scope

- >7,300 entries
- every entry has a unique ID

► Linked to text corpus

- words in texts are parsed morphologically
 - morphological elements are tagged with lexicon ID numbers
- All lexicon and text resources are for (and are actively used by) academic and community researchers, learners, and teachers.

Florrine Super in 2013

fâat ivíshtaanti?

pa'áama nivíshtaanti.

pay hum ivíshtaanti?

“Karuk Dictionary and Texts” online: Home page

Karuk Dictionary and Texts



A collaboration between the Karuk Tribe and the University of California, Berkeley

[Dictionary](#)[Sentences & Texts](#)[Our Project](#)[Audio Thesaurus](#)[Abbreviations & Links](#)

Search the Dictionary, Sentences, and Texts

Karuk: (☐ exact matches only)

Accent is ignored. To find é, type é or e.

English:

Meaning: (dictionary searches only)

Grammatical category: (dictionary searches only)

☒ Dictionary search

☐ Sentence and text search

☐ Audio only (only shows results with audio)

(<http://linguistics.berkeley.edu/~karuk>)

“Karuk Dictionary and Texts”: Dictionary search *run*

Karuk Dictionary

by William Bright and Susan Gehr (© Karuk Tribe)

Your search: English **run** | [New search](#)
Index order: alphabetical | [text frequency](#)

Search Index

1-50 of 92 result(s)
Previous 50 | [Next 50](#)

árihkkaa to run inside
árihripaa to run inland
ihmar / ihmára- (plural) to run (used of salmon, as well as of creatures with legs)
ihmárafak / ihmárafaku- (pl.) to run down from uphill
ihmárafuruk (pl.) to run indoors
ihmáarakurih (salmon) to run into a creek
ihmarápiithva / ihmaraapiithvu- (pl.) to run around
ihmáaramnih (pl.) to run into
ihmáarishuk (pl.) to run out
ihmáararoov (pl.) to run upstream from here
ihmáararup / ihmáararupu- (pl.) to run downstream from here
ihmáararupuk (pl.) to run outdoors
ihmárasip / ihmárasipree- (pl.) to start to run
ihmárava / ihmáravu- (pl.) to run to there
ihmárarav / ihmárarava- (pl.) to run in through
ihmárararak (pl.) to run downstream from here
ihmárararayva / ihmáráráyvu- (pl.) to run around indoors
ihmárish / ihmárishrih- (pl.) to stop running
ihmáruk (pl.) to come running
ihmárunih (pl.) to run downhillward from here
ihráaprihuk (liquid) to run out
ikhunih to be a ridge running away downhill
ikhúripaa **2** ridge running inland; in particular, Steinacher Ridge, near Katimin
ikhuroov / ikhuroova- **1** ridge running upriver
ikihva / ikihvu- to grunt
ikririhroovaha to be a steep slope running upriverward
ikririhrup / ikririhrupu- to slope running downstream from here
ikuroov / ikuroova- **3** ridge running upriver
ikvip / ikvirip- to run (used of salmon, as well as creatures with legs)
ikvipaan runner

“Karuk Dictionary and Texts”: Dictionary frequency sort

Karuk Dictionary

by William Bright and Susan Gehr (© Karuk Tribe)

Your search: English **run** | [New search](#)
Index order: [alphabetical](#) | text frequency

Search Index

1-50 of 92 result(s)

Previous 50 | [Next 50](#)

ikvip / **ikvīrip-** to run (used of salmon, as well as creatures with legs)
ikvīripup / **ikvīripupu-** to run off downriver
ikvīripship / **ikvīripshipriv-** to start to run
ithvip / **ithvīrip-** (two people) to run
ikvīripma / **ikvīripmu-** to run to (a destination)
ikvīripunih to run away downhill
irurav / **iruram-** (pl.) to run away
ithrīsh / **ithrīshrih-** to set (liquid) down; (liquid) to run together
ihmar / **ihmāra-** (plural) to run (used of salmon, as well as of creatures with legs)
ihmārava / **ihmāravu-** (pl.) to run to there
ihmāravarak (pl.) to run downstream from here
ikvīripooov / **ikvīripooovu-** to run upriver from here
ihmāraoov (pl.) to run upstream from here
ihmārarup / **ihmārarupu-** (pl.) to run downstream from here
ikvipaan runner
ikvīripaa to run up from uphill; to run up from downriver
ikvīripvarak to run down from upriver
īrihramnih to drip into, (liquid) to run into
ishipvāraa (pl.) to run in through
ithvīripma / **ithvīripmu-** (pl.) to run to
ithvīripaa 2 (two) to run up from downriver
ithvīripunih (two people) to run away downhill
ithvīripuraa (two) to run uphill from here
ithvīripvarak (two people) to run down from upriver
ārihkaa to run inside

"Karuk Dictionary and Texts": *ikvíripma*

Search Index

1-50 of 92 result(s)

Previous 50 | [Next 50](#)

[ikvip](#) / [ikvírip](#)- to run (used of salmon, as well as creatures with legs)

[ikvíripup](#) / [ikvíripupu](#)- to run off downriver

[ikvíripship](#) / [ikvíripshipriv](#)- to start to run [ithvip](#) / [ithvrip](#)- (two people) to run

[ikvíripma](#) / [ikvíripmu](#)- to run to (a destination)

[ikvíripunih](#) to run away downhill

[irurav](#) / [iruram](#)- (pl.) to run away

[ithriish](#) / [ithriishrih](#)- to set (liquid) down; (liquid) to run together

[ihmar](#) / [ihmára](#)- (plural) to run (used of salmon, as well as of creatures with legs)

[ihmárava](#) / [ihmáravu](#)- (pl.) to run to there

[ihmáravarak](#) (pl.) to run downstream from here

[ikvíripooov](#) / [ikvíripooovu](#)- to run upriver from here

[ihmárarooov](#) (pl.) to run upstream from here

[ihmárarup](#) / [ihmárarupu](#)- (pl.) to run downstream from here

[ikvipaan](#) runner

[ikvíripaa](#) to run up from uphill; to run up from downriver

[ikvíriparak](#) to run down from upriver

[irihramnih](#) to drip into, (liquid) to run into

[ishipváraa](#) (pl.) to run in through

[ithvripma](#) / [ithvripmu](#)- (pl.) to run to

[ithvripaa](#) 2 (two) to run up from downriver

[ithvripunih](#) (two people) to run away downhill

[ithvripuraa](#) (two) to run uphill from here

[ithvriparak](#) (two people) to run down from upriver

[árihkaa](#) to run inside

[ihmárafak](#) / [ihmárafaku](#)- (pl.) to run down

Dictionary Entry

lexicon ID #2203 | revised Nov 12 2014

ikvíripma / **ikvíripmu**- • v • to run to (a destination)

Derivation: [ikvip](#)-[ma](#)
run-to

Source: KV

Grammatical note: Cf. -ma (a/u) 'to' (G753.10).

- **tuyshipreek kúuk ikvíripmí.** Run to the hill! [Reference: KM 24.38]
- **kári xás tárupak kúna kúuk ukvíripma.** Then Grizzly ran over to the hatch door. [Reference: KS44. Grizzly and hazelnuts 035]

Sentence examples (5)

Display mode: sentence | [word](#) | [word components](#)

1. **iináak tukvíripma.**
He is running into the house.
| Source: Vina Smith, Sentences about spatial relations (VS-13) | [read full text](#)
| Spoken by Vina Smith | [Download](#) | [Play](#)
2. **xás yurúktuuf pookvíripma xás " nani'ifuth thúfkaam kam'árihish."**
And when he ran to Bluff Creek, then (he said) "Let it become a big creek behind me!"
| Source: Julia Starritt, "Coyote Goes to a War Dance" (WB_KL-06) | [read full text](#)
3. **xás xóoxhirak ukvíripma.**
And he ran to Martin's Ferry.
| Source: Julia Starritt, "Coyote Goes to a War Dance" (WB_KL-06) | [read full text](#)
4. **paxuntápan kunífkthi, kúuk too kvíripma, xás koovúra tu'ifik píshiiip.**
When they picked acorns, she would run there, and she would pick them all first.
| Source: Julia Starritt, "The Bear and the Deer" (WB_KL-32) | [read full text](#)
5. **xás sáruk astiip kúuk ukvíripma.**
And she ran down to the river-bank.
| Source: Julia Starritt, "The Bear and the Deer" (WB_KL-32) | [read full text](#)

"Karuk Dictionary and Texts": Examples glossed

Search Index

1-50 of 92 result(s)

Previous 50 | [Next 50](#)

[ikvip](#) / [ikvipir](#)- to run (used of salmon, as well as creatures with legs)

[ikviprup](#) / [ikviprupu](#)- to run off downriver

[ikvipship](#) / [ikvipshipriv](#)- to start to run [ithvip](#) / [ithvipir](#)- (two people) to run

[ikvipirma](#) / [ikvipirpu](#)- to run to (a destination)

[ikvipirpuni](#)h to run away downhill
[irurav](#) / [iruram](#)- (pl.) to run away
[ithriish](#) / [ithriishrih](#)- to set (liquid) down; (liquid) to run together

[ihmar](#) / [ihmára](#)- (plural) to run (used of salmon, as well as of creatures with legs)

[ihmáraya](#) / [ihmárayu](#)- (pl.) to run to there
[ihmárayarak](#) (pl.) to run downstream from here

[ikvipirproov](#) / [ikvipirproovu](#)- to run upriver from here

[ihmárayaroov](#) (pl.) to run upstream from here

[ihmárayarup](#) / [ihmárayarupu](#)- (pl.) to run downstream from here

[ikvipaap](#) runner

[ikvipirpaa](#) to run up from uphill; to run up from downriver

[ikvipirvarak](#) to run down from upriver
[irihramni](#)h to drip into, (liquid) to run into

[ishipváraya](#) (pl.) to run in through
[ithvipirma](#) / [ithvipirpu](#)- (pl.) to run to

[ithvipirpaa](#) 2 (two) to run up from downriver

[ithvipirpuni](#)h (two people) to run away downhill

[ithvipirpaa](#) (two) to run uphill from here
[ithvipirvarak](#) (two people) to run down from upriver

[árikkaa](#) to run inside

Dictionary Entry

lexicon ID #2203 | revised Nov 12 2014

ikvipirma / **ikvipirpu**- • v • to run to (a destination)

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Sentence examples (5)

Display mode: [sentence](#) | [word](#) | word components

1. [lináak](#) [t-u-kvipirma](#)
indoors PERF-3s(>3)-run.to
He is running into the house.
| Source: Vina Smith, Sentences about spatial relations (VS-13) | [read full text](#)
| Spoken by Vina Smith | [Download](#) | [Play](#)
2. [xás](#) [yurúktuuf](#) [p-o-kvipirma](#) [xás](#) [nani](#)-['ifuth](#) [thúf-kaam](#) [kam-árihish](#)
then Bluff.Creek NOMZ-3s(>3)-run.to then 1sPOSS-behind creek-large 3s(>3)-become
And when he ran to Bluff Creek, then (he said) "Let it become a big creek behind me!"
| Source: Julia Starritt, "Coyote Goes to a War Dance" (WB_KL-06) | [read full text](#)
3. [xás](#) [xóoxhirak](#) [u-kvipirma](#)
then Martin's.Ferry 3s(>3)-run.to
And he ran to Martin's Ferry.
| Source: Julia Starritt, "Coyote Goes to a War Dance" (WB_KL-06) | [read full text](#)

“Karuk Dictionary and Texts”: Text display

Julia Starritt, "Coyote Goes to a War Dance" (1957)

Publication details: William Bright, **The Karok Language** (1957), pp. 184-189, Text 6

Project identifier: WB_KL-06

Text display mode: [paragraph](#) | [sentence](#) | [word](#) | [word components](#)

[1] **pihnêefich vaa káan mukríhraam pihneefthuf'ípan.**
Coyote's fishery was there at the end of Wilder Gulch.

[2] **xás káan atahári vúra ukrihankôotih.**
He was always fishing there.

[3] **xás tuthítiv, chími uthivtapáraheesh.**
And he heard it, there was going to be a war dance.

[4] **xás ararátaay chími kuniviyihukeesh.**
A lot of people were going to come.

[5] **xás káan panamnih'ifápiit áxak kun'íin.**
And two Orleans girls lived there.

[6] **xás pu'akara'íin kínmaahthip.**
And nobody had seen them.

[7] **xás kunpiip " payêem xasík chí kinmáheesh."**
And they said, "Now we are going to see them."

[8] **xás uum pihnêefich káru vúra púva haríxay maahvúnaa.**
And Coyote had never yet seen them either.

[9] **xás upíio " miník níkvâavunaa."**

“Karuk Dictionary and Texts”: Text display glossed

Julia Starritt, "Coyote Goes to a War Dance" (1957)

Publication details: William Bright, **The Karok Language** (1957), pp. 184-189, Text 6

Project identifier: WB_KL-06

Text display mode: [paragraph](#) | [sentence](#) | [word](#) | word components

-
- [1] [pihnêefich](#) [vaa](#) [káan](#) [mu-krihraam](#) [pihneefthuf-’ípan](#)
 coyote so there 3sPOSS-fishing.platform Wilder.Gulch-end
 Coyote’s fishery was there at the end of Wilder Gulch.
- [2] [xás](#) [káan](#) [atahári](#) [vúra](#) [u-krihan-kôo-tih](#)
 then there always Intensive 3s(>3)-go.fishing-to-DUR
 He was always fishing there.
- [3] [xás](#) [t-u-thítiv](#) [chími](#) [u-thivtap-ára-h-eesh](#)
 then PERF-3s(>3)-hear soon 3s(>3)-war.dance-having-DENOM-FUT
 And he heard it, there was going to be a war dance.
- [4] [xás](#) [arará-taay](#) [chími](#) [kun-ivyihuk-eesh](#)
 then human-much soon 3pl(>3s)-come.(pl.)-FUT
 A lot of people were going to come.
-
- [5] [xás](#) [káan](#) [panamnih’ífpáit](#) [áxak](#) [kun-’iin](#)
 then there Orleans.girl two 3pl(>3s)-(two).be
 And two Orleans girls lived there.
- [6] [xás](#) [pu’akara-’iin](#) [kín-maah-tih-ap](#)
 then nobody-TOPIC 3pl>3pl-see-DUR-NEG
 And nobody had seen them.
-

Dictionary search: *-rámnih* 'into a container'

Dictionary Entry

lexicon ID #5175 | revised May 16 2013

-rámnih • SUFF • in, into a container

Derivatives (9)

aakrámnih "to reach into (a container)"
asip'akramnihaan "young boy assistant in the Orleans world-renewal ceremony (Kroeber & Gifford, p. 7)"
ihmáramnih "(pl.) to run into"
ikhúramnih "to put one's head in"
ikúramnih "to put one's head in"
ikylimnamnih "to fall in"
ikylimnamnihmath "to drop something in"
ipasramnih "to bring (a person) into"
ishkáakramnih "to jump into"

Grammatical note: WB 753.13

Sentence examples (8)

Display mode: [sentence](#) | [word](#) | word components

- páah-ak ú-skaakramnih xás ithyáruk u-yiltkar**
 boat-locative 3s(>3)-jump.into then across 3s(>3)-row.across
 He jumped into a boat, and he paddled across-river.
 | Source: Mamie Offield, "Coyote's Journey" (WB_KL-05) | [read full text](#)
- xás kun-pilip chimi nu-plkaan chimi óok kum-eethivthaaneen nu-pipas-ramnih-i**
 then 3pl(>3s)-soon 1pl(>3)-soon here 3sPOSS-land 1pl(>3)-take.(person).home-into-IMPER
 And they said, "Let's go get her, let's bring her back into this world!"
 | Source: Mamie Offield, "How Deer Meat Was Lost and Regained" (WB_KL-33) | [read full text](#)
- púyava óok u-pipas-ramnih-anik pa-púufich**
 you.see here 3s(>3)-take.(person).home-into-ANC the-deer
 So he brought Deer back here.
 | Source: Mamie Offield, "How Deer Meat Was Lost and Regained" (WB_KL-33) | [read full text](#)
- tá kun-sán-aamnih-va pa-mukún-uup**
 PERF 3pl(>3s)-carry.(things)-into-PL.ACT the-3plPOSS-possession
 They put their possessions in (the boats).
 | Source: Nettie Reuben, "The Boy from Itúkuk" (WB_KL-57) | [read full text](#)

Dictionary search: *ishkákramnih* 'jump into (a container)'

Karuk Dictionary

by William Bright and Susan Gehr (© Karuk Tribe)

[New search](#)

Index order: alphabetical | [text frequency](#)

Search Index

ishkáakramnih to jump into

Dictionary Entry

lexicon ID #2985 | revised Dec 19 2014

ishkáakramnih • v • to jump into

Derivation: [ishkak-rámnih](#)
jump-into

Note: Cf. -ramnih 'into' (G753.13)

- **ta'ítam pihnêefich upishkaakramniheen.** Then Coyote jumped back in (the boat). [Reference: KT 140.6]

Sentence example (1)

Display mode: sentence | [word](#) | [word components](#)

1. **páahak úskaakramnih, xás ithyáruk uvítkar.**
He jumped into a boat, and he paddled across-river.
| Source: Mamie Offield, "Coyote's Journey" (WB_KL-05) | [read full text](#)

Why directionals?

- Frequency

12 of the 40 highest-frequency Karuk verbs contain directionals

Why directionals?

- ▶ Frequency
- ▶ Typology

‘Landau & Jackendoff (1993) ... predict[ed] that there would be no preposition or spatial relator encoding featural properties of objects, e.g. none meaning “through a cigar-shaped object” ... But the Californian language Karuk has precisely such a spatial verbal prefix [*sic*], meaning “in through a tubular space” (Evans & Levinson 2009)

Why directionals?

- ▶ Frequency
- ▶ Typology
- ▶ Sociocultural salience in a riverine ecology

vaa kúth sâam u-saam-núpu-tih

that because.of down 3SG-flow-downstream.from.here-DUR

káru vaa kúth áama u-kvírip-raa-tih

also that because.of salmon 3SG-run-up.from.downriver-DUR

“That’s why (the water) flows downstream, and that’s why salmon run up the river.” (Mamie Offield, WB_KL-17)

Klamath River (in Karuk territory)



Karuk agglutinating verbal morphology

1. **pu=na-'ísh-eesh-ara**

NEG=1S(>3)-drink-FUT-NEG

"I won't drink."

(Nettie Reuben, WB_KL-01)

2. **nee-shkáx-ishrih-math-eesh**

2S/3S>1S-be.quiet-down-CAUS-FUT

"It will stop me."

(Mamie Offield, WB_KL-45)

3. **t-u-p-aatí-furuk**

PERF-3SG>3-ITER-carry.in.a.burden.basket-into.encoded.space

"She carried him back indoors."

(Nettie Reuben, WB_KL-59)

Karuk verb structure (cf. Bright 1957)

► Prefixes

Agreement prefixes + iterative *ip-* 'again' + manner *kupa-* 'so'
+ event-internal pluractional reduplication

► ~60 suffixes

► Derivational (5 position classes)

- Class 1 (mobile): event-external pluractional *-va*
- Class 2: several less productive suffixes
- **Class 3: directionals**
- Class 4: associated motion, benefactive, causative, etc.
- Class 5: essive *-ahi* (valence-changing)

► Inflectional (7 position classes)

- Collective plural *-naa*, diminutive *-ach*
- Tense-aspect: durative *-tih*, future *-avish*, past *-at*, etc.
- Imperative *-i*, inverse *-ap*, negative *-ara*

Class 3 directional suffixes (Bright 1957)

► Unpaired suffixes

-*kírih* 'in, onto fire', -*ku* 'onto a vertical surface', -*kúrih* 'into water',
 -*path* 'around in a circle', -*raṽ* 'in(to)', -*rip* 'off, out', -*ruprin*
 'through', -*suru* 'off, away'

► Paired suffixes

-mu "thither"	: -ra· "hither"
-rupu "hence downriverward"	: -ra· "hither from downriver"
-unih "down from a considerable height; hence downhillward"	: -ra· "hither from downhill"
-ura· "up to a considerable height; hence uphillward"	: -faku "hither from uphill"
-rô·vu "hence upriverward"	: -várah "hither from upriver"
-sip(riv) "up to the height of a man or less"	: -iṣ(rih) "down from the height of a man or less"
-kaθ "hence across a body of water"	: -rina "hither from across a body of water"
-kara "horizontally away from the center of a body of water"	: -rîPa· "horizontally toward the center of a body of water"
-kara "into one's mouth"	: -rûPa· "out of one's mouth"
-rámnih "into a container"	: -rîṣuk "out of a container"
-vara "in through a tubular space"	: -kiv "out through a tubular space"
-rûprih "in through a solid"	: -rûpraṽ "out through a solid"
-fûruk "into an enclosed space"	: -rûPuk "out of an enclosed space"
-vrin "in opposite directions"	: -tunva "toward each other"
-várayva "here and there within an enclosed space"	: -θuna "here and there in an open area"

Class 3 paired directional suffixes: A close-up

► Deictic specification

-mu "thither"	: -ra· "hither"
-rupu "hence downriverward"	: -ra· "hither from downriver"
-unih "down from a considerable height; hence downhillward"	: -ra· "hither from downhill"
-ura· "up to a considerable height; hence uphillward"	: -faku "hither from uphill"
-rô·vu "hence upriverward"	: -várah "hither from upriver"
-sip(riv) "up to the height of a man or less"	: -iš(rih) "down from the height of a man or less"
-kaθ "hence across a body of water"	: -rina "hither from across a body of water"

► Ground specification

-kara "horizontally away from the center of a body of water"	: -ríPa· "horizontally toward the center of a body of water"
-kara "into one's mouth"	: -rúPa· "out of one's mouth"
-rámnih "into a container"	: -ríšuk "out of a container"
-vara "in through a tubular space"	: -kiv "out through a tubular space"
-rúprih "in through a solid"	: -rúpraṽ "out through a solid"
-fúruk "into an enclosed space"	: -rúPuk "out of an enclosed space"

► Miscellaneous

-vrin "in opposite directions"	: -tunva "toward each other"
-várayva "here and there within an enclosed space"	: -θuna "here and there in an open area"

Semantic and syntactic analysis

► Macaulay (2004)

(6) Classification of directional suffixes

I. Directionals: do not add argument

II. Applicatives: add argument

A. Simple applicatives (Path)

B. Applicative + object (Path + Ground): add and conflate argument

1. Applicative + object; category of ground generically specified

2. Applicative + object; ground as medium generically specified

3. Applicative + object; ground specified

C. Applicative + object (Path + Ground): add/conflate deictic argument

► Examples

► I: **-ishrih** 'down (from a person's height)'

► IIA. **-suru** 'off'

► IIB(1). **-ramnih** 'into a container'

► IIC(1): Distal goal. **-mu** 'to there'

► IIC(3): Proximal goal + path. **-faku** 'to here from uphill'

Challenge 1: Semantic complexity

Some more complex things may be easier to learn!

- ▶ Simplicity may correspond to generality of usage
 - ▶ Syntactic simplicity: fewer features, required arguments
 - ▶ Semantic simplicity: general meaning, less topological specificity

This may in turn yield difficulty in learning and teaching.

- ▶ Trade-off: analytic complexity \neq pedagogical complexity

Challenge 2: Translation non-equivalence

General directionals correspond only imperfectly to English general-purpose prepositions. Mismatches are bidirectional:

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- ▶ **ikyĩĩ** 'fall' → **ikyii-mu** 'reach'

káan ú-kyii-m-eesh

there 3SG-fall-towards-FUT

"It will reach there."

(DF 07)

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(DF 07)

- ▶ Other Karuk suffixes
 - ▶ **-ûunish**: **chuph-ûunish** 'talk to', **ikvit.h-ûunish** 'dream about', **pikshayv-ûunish** 'tell lies to'
 - ▶ Benefactive **-ih**: **ikyviichv-ih** 'work for'; **iktáv-ih** 'hand to' (**iktav** 'hold'), **ikyéeh** 'make for' (**ikyav** 'make'), **pakurîihv-ih** 'sing to'

Challenge 3: Sociocultural changes

- ▶ Many elder speakers and community members live outside traditional Karuk land, e.g. where the riverine landscape is not salient.

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- ▶ Even on the Klamath River, modern communication and transportation are not so river-oriented.

Challenge 3: Sociocultural changes

- ▶ Many elder speakers and community members live outside traditional Karuk land, e.g. where the riverine landscape is not salient.
- ▶ Even on the Klamath River, modern communication and transportation are not so river-oriented.
- ▶ Some of the less common directionals are used rarely if at all by today's elders.

Pedagogical approaches: A smuggler's guide

- ▶ Smuggle grammar into life (adapted from L. Hinton)
- ▶ Break down grammatical patterns into pragmatic contexts that are determined by semantically coherent neighborhoods:
local coherence maxima
- ▶ Comparisons from yesterday:
 - ▶ Grenoble (2015) on situational contexts for language learning
 - ▶ Cox (2015) on paradigmatic learning in complex morphology

We encourage situational paradigms!

Example 1: Inside and outside

A semantically specific pair

- ▶ **-furuk** 'into an enclosure (e.g. house)'

1. **kári xás kun-p-ihmára-furuk iinâak**

and and 3PL-ITER-run.PL-into.enclosure indoors

'Then they ran back indoors.' (Nettie Reuben, WB_KL-11)

2. **xás chavúra u-'árih-furuk**

and eventually 3SG-jump-into.enclosure

'Then eventually she jumped in (her lair).'

(Julia Starritt, WB_KL-32)

- ▶ **-rupuk** 'out of an enclosure (e.g. house)'

3. **pa=kéevniikich u-'árih-rupuk**

the=old.woman 3SG-jump-out.of.enclosure

'The old woman jumped out.' (Lottie Beck, WB_KL-18)

Example 2: Down and up

► Motion without **-ish(rih)** ‘down’

1. **xás vúra xára p=óo-kyiv**

and INTNS long.time COMP=3SG-fall

‘It was a long time that he fell.’ (Mamie Offield, WB_KL-09)

► Motion with **-ish(rih)** ‘down’

2. **kári xás u-kyív-ish âapun**

and and 3SG-fall-down ground

‘And (Grizzly) fell to the ground.’ (Nettie Reuben, WB_KL-34)

3. **tá ni-kyív-ish**
PERF 1SG-fall-down

‘I fell down.’

(Lucille Albers, LA-02)

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► Analogously

► **-sip(riv)** ‘up’

► transitive frames

► aspectual uses: ‘down’ > resultative, ‘up’ > inceptive

Example 3: Nonalternating **-mu** verbs

Some very common verbs contain **-mu** but do not alternate with simpler forms.

- ▶ **uumu** 'arrive'
- ▶ **vâaramu** 'go away, leave'
Dual **iyâaramu** 'go, leave'
(Plural has different morphology)
- ▶ **îipmu** 'return, arrive (there) again, go back'

These select for a Goal complement.

Example 4: Alternating -mu verbs

► Location context

- **pa=’ávansa úuth u-víi-tih**
the=man out.in.water 3SG-paddle-DUR
‘The man is paddling out in the water.’
- **pá=paa úuth u-thívruuh-tih**
the=boat out.in.water 3SG-float-DUR
‘The boat is floating out in the water.’

► Goal context

- **chavúra yíiv tá kun-víit-ma**
eventually far PERF 3PL-paddle-towards
‘Eventually they paddled a long way.’
- **chavúra kaanvári u-thívruuh-ma**
eventually around.there 3PL-float-towards
‘Eventually he floated to that vicinity.’

Conclusion: Teaching directionals

For any complex grammatical categories:

- ▶ Identify local coherence maxima:
 - ▶ pragmatic or situational contexts where semantically coherent patterns can be identified and contrasted with paradigmatically opposed contexts.
 - ▶ Cf. teaching the German accusative vs. dative, or Greek or Latin cases by sub-pattern — ‘dative of disadvantage’, etc.
- ▶ It is helpful to know:
 - ▶ what is frequent and what is infrequent in usage
 - ▶ what all the derivatives are, all the examples of all the derivatives, or all the examples of just one derivative

Our database and web interface have been useful tools.

Yôotva!

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